

C-O UTILITY ELECTRIC BENCH DRILL—With Four Speeds

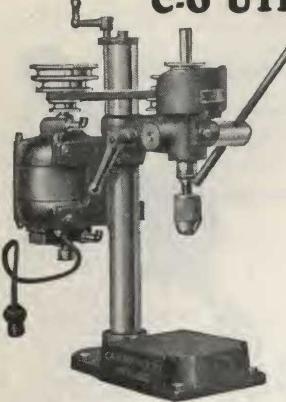


Fig. 4952. Mfrs. 25

V Belt Drive. Ready for the job. For use in garages, machine shops and the home. Adjustable head can be moved up and down to any desired height and can be revolved in a circle. By placing drill near end of bench and swinging head around, long pieces of shafting or large work can be drilled. Vertical type motor for 110 volt, 60 cycle, single phase, A. C.

Travel of head on column, 7½ inches.
Drills to center of a 9-inch circle.
Bores holes up to 1/2-inch diameter. 3 jaw chuck.
Up and down run of spindle, 2½ inches.
Greatest distance between spindle and base, 10½ inches.
Distance from frame to center of spindle, 4½ inches.
Spindle speeds—485, 995, 1755, 3105 R.P.M.
Size base—planed, 6x6 inches.
Size of column, 1¾ inches.
Bench space, 11 by 6½ by 23 inches high.
Weight: crated, 76, net, 62 pounds.

★ NET EACH, \$39.50

C-O No. 33 BALL BEARING SENSITIVE SIX SPEED BENCH DRILL

Equipped with two annular ball bearings in the spindle cone pulley, ball bearing motor bracket and one ball thrust bearing on spindle which has a 3 inch travel. The use of SIX STEP SHEAVE TYPE PULLEYS gives a wide range of spindle speeds and with the heavy endless V-Belt ample power is transmitted to drive drill to its full capacity of 1/2 inch. A simple belt tightener is provided by means of a sliding member to which the motor is attached. By use of a double hinged motor bracket the belt can be readily changed to any of the six steps. The column is turned and a heavy slotted table is provided with table rest. The spindle and the table rest are bored in perfect alignment. The table and rest can be swung out of the way so the base can be used.

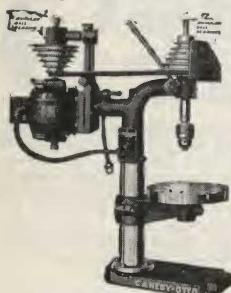


Fig. 5287. Mfrs. 33

110 Volt, 60 Cycle, 1 Phase. . . ★ NET EACH, \$75.50

Three wire rubber covered cord and three-way plug.
Spindle speeds: 450, 770, 1165, 1675, 2365, 3540 RPM. Drills to center of 10 inch circle. Capacity, 0 to 1/2 inch. Greatest distance spindle to table, 11-1/2 inches; greatest distance spindle to base, 16-1/2 inches; up and down run of spindle, 3 inches; up and down run of table, 8-1/2 inches; diameter of round table, 9-1/4 inches; distance column to spindle, 5-1/4 inches; planed surface of base, 8x9 inches. Height, 31-1/2 inches. Floor space, 8-1/4x14-1/4 inches. Shipping weight, 158 pounds.

C-O BALL BEARING SENSITIVE BENCH DRILL

For metal or wood drilling, sanding, mortising, grinding, and routing. It is built to produce accurate work. Completely equipped—"Ready For The Job."

Extra large double row ball bearings in the spindle cone pulley and two annular ball bearings in the double splined spindle. Key chuck up to 17/32 inch capacity, or No. 1 Morse Taper Spindle, when specified, at the same price. 5 step sheave pulley for V-belt and can be quickly changed. Heavy slotted, accurately machined table can be tilted to any desired angle, right or left.

Drills holes up to 17/32 inches; drills to center 16-1/4 inches; speeds, 5200, 2835, 1700, 917, 460 RPM.; travel of spindle, 4-5/8 inches; working surface of table, 10x10 inches; working surface of base, 10x10 inches; maximum height with spindle raised, 39 inches; least diameter of spindle, 5/8 inch; maximum distance from chuck to table, 11 inches; diameter of column, 3 inches; maximum distance from chuck to base, 17 inches. Shipping weight, 120 pounds; shipping weight of motor, 30 pounds. 110 volt, 60 cycle, 1 phase.

★ NET EACH, \$50.75

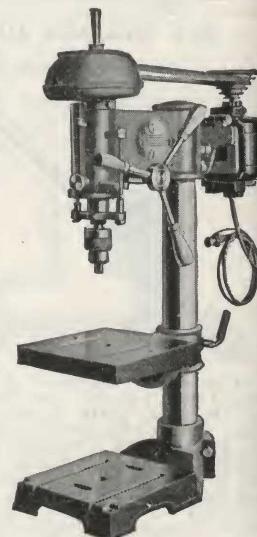


Fig. 5288. Mfrs. 16

BUFFALO HEAVY DUTY PRODUCTION DRILLS

Gives long life, accurate, speedy operation and maximum facility in operating. As a metal-working tool, it is entirely competent to do manufacturing. For small diameters which run to 10,400 using 3400 r.p.m., motor-sensitivity and convenience make high productivity and low drill cost. For large diameters—full weight and rigidity assure clean quick holes.

Morse taper spindle available with No. 1 taper in place of standard at no extra cost. The spindle is held rigidly against end play and vibration; running true in two precision ball-bearings. Pulley is carried on extra large double row ball bearings. This prevents canting, allows spindle to carry no load—only smooth driving power is transmitted to spindle. Feed is by special cut rack and pinion, giving a smooth rolling motion. Graduated stop-bar provides for feeding to required depth. Three-spoke feed wheel with comfortable hand knobs. Automatic quick-return of spindle. Table tilts to any angle. Full section table arm and table bearing are rigid under load. V belt drive. Motor is 60 cycle, 110 volt. Cord, plug, and switch.

Type

	BENCH	FLOOR
Drills holes up to, inch.....	1/2	1/2
Drills to center of circle, inch.....	15-1/4	15-1/4
Five speeds, R.P.M.	5200, 2700, 1530, 840 and 450	Same
Feed travel, inches.....	4-1/2	4-1/2
Working surface of table, inches.....	10x11	10x11
Working surface of base, inches.....	10x10	10x10
Maximum height spindle raised, inches.....	38
Least diameter of spindle, inches.....	5/8	5/8
High grade, geared chuck, inches.....	0 to 1/2	0 to 1/2
Maximum distance chuck nose to table.....	12	42
Diameter of column, inch.....	2-3/4	2-3/4
Maximum distance chuck nose to base.....	17	47
Overall height, inches.....	108	162
Shipping weight, pounds.....	\$51.50	\$58.50
★ NET COMPLETE WITH MOTOR	\$38.00	\$45.00

★ NET COMPLETE WITH MOTOR

★ NET WITHOUT MOTOR



Fig. 4930. Mfrs. 15

BUFFALO BALL BEARING POST DRILLS



Fig. 3984

Mfrs. 61R. Useful in every shop. Sturdy and well made. Cast iron frame. All bearings bored and reamed, assuring smooth easy running. Shaft and spindle are of steel, heavy and carefully finished. Accurately fitted gears and a medium weight flywheel aid. Combination cast iron table and fork is adjustable to any position up and down. Ball bearing end thrust eliminates 90% friction.

Drills to center of 11-1/2 inch circle.

Drills holes up to 5/8 inch. 7/8 inch spindle diameter.

Run of feed, 3 inches.

Run of table, 9 inches.

Length overall, 32 inches.

Spindle bored for 1/2 inch straight shank bits. Can be bored also for 41/64 inch, 5/8 inch or Nos. 1, 2 or 2 Morse Tapers at an extra charge.

Net weight, 55 pounds.

★ NET EACH, \$8.00

Mfrs. 614R. For continuous, hard usage. Sturdy cast iron frame with a steel shaft and spindle, accurately machined, fitted and finished. Bearings are bored and reamed in the solid metal frame. Two feeds, hand and automatic. Automatic feed is adjustable to three speeds. Round, slotted table.

Drills to center 14 inch circle.

Drills holes up to 1-1/4 inch.

1 inch spindle diameter.

Run of table, 10-1/4 inches.

Run of feed, 3 inches.

Length overall, 38 inches.

Furnished with chuck for 1/2 inch straight shank bits. Can also be bored for 41/64 inch or Nos. 1, 2 or 3 Morse Taper at an extra charge.

Net weight, 83 pounds.

★ NET EACH \$15.00



Fig. 3985



Fig. 3986

BUFCO FORGE

For Agricultural Implement Work. For Occasional Repair Work. For Rivet Heating

Mfrs. 061. For agricultural implement work, occasional repair work and rivet heating. An accurate stamped steel gear and fan case furnish the air for the heavy one-piece drawn steel hearth. Bronze bushings. Fan has a 5 1/2 inch pressed steel wheel. Mounted on three strong jointed legs and will stand firmly on uneven ground. Shipped knocked down. 18 inch diameter hearth, 3 inches deep. Windshield type hood. Shipping weight, 48 pounds.

★ NET EACH, \$8.50

BUFFALO RIVET FORGES



Fig. 4953

One-piece unbreakable, all steel hearth, pressed out of heavy steel plate by enormous presses. Is strong, and light in weight. Four heavy pipe legs widely spread at the bottom and securely fastened at top and center. Blowers are mounted so that they can be taken off in a minute or two, in fact, the whole forge can be readily knocked down for transportation. Gear ratio 47-1/2 to 1. Fan case is 12 inches in diameter. Net weight, 96 pounds.

★ NET EACH, \$36.00

BUFFALO FORGES



Fig. 3988

With large, one-piece, seamless, heavy gauge steel hearth. No seams nor sharp corners to collect moisture and rust. Top of the hearth is turned back to form a broad flange, strengthening the whole forge and forming a convenient tool rest. Heavy steel angle legs, securely braced with steel. With blower having a gear ratio of 47-1/2 to 1. Fan case diameter is 12 inches. Hearth is 24 by 30 by 3 inches. Water tank furnished only when specified at a Net Extra charge of \$6.00.

Mfrs. No.	Hood	Weight Pounds	★ NET EACH
735H	Half	107	\$37.50
735	None	97	\$33.00

BUFFALO OIL-BURNING FORGE



Fig. 3989

An easily controlled and safe method of heating rivets where compressed air is available. No sparks. Rivets are always in plain view and held at the proper temperature. Impossible to burn the rivets. Welded steel tank with steel fire chambers lined with 2 inches of refractory material of the best quality. Worn-out linings quickly replaced. Air is supplied to the tank through a single connection which furnishes pressure for the oil supply as well as air for the atomizer. Burns kerosene, distillate, or any fuel oil.

Size, Number	1	2
Height to chamber top	43	45
Chamber height, in....	11 1/2	14 1/2
Inside diameter, in....	7	10
Inside height, in....	6	8
Fire opening, in....	3 5/8 x 5 1/4	4 x 6
Tank capacity, gallons	12	18
Shipping weight, lbs..	175	260
★ NET EACH	\$65.00	\$90.00

BUFFALO VOLUME FANS
Can Be Used Either As a Blower
Or Exhauster

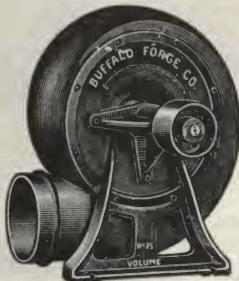


Fig. 3990

Can be adjusted for exhaust to eight different positions as required, and to either clockwise or counter clockwise rotation. Can be used as either a blower or exhauster. Side plates and feet are cast in one piece. Heavy duty, dust-proof ball bearings with deep raceways in both inner and outer rings, insure efficient, trouble free running. Rigid, compact and will resist deterioration from moisture, heat, acid fumes, or gritty dust.

Especially adapted for burning sawdust, conveying material, drying systems, emery and polishing wheels, exhausting smoke, forced draft, forge and furnace blast, fume exhaust, hollow blast grates, mine ventilation, shavings exhaust systems, toilet ventilation, vapor removal, and numerous other uses.

SPECIFY whether wanted for pulley drive or for direct motor connection. (No motor.)

Size No.	Outlet Diameter Outside	Inlet Diameter Outside	Pulleys and Face	★ NET EACH
21	4½	5	3 x 2½	\$36.00
22	5½	6	4 x 3	\$48.00
23	7½	8	4 x 3	\$58.50
24	8½	9½	5¾ x 3½	\$74.25
25	10	10½	5¾ x 3½	\$93.00

BUFFALO ELECTRIC BLOWER



Fig. 3991

A small forge fire blower that can also be used on small furnaces, church organs, etc. Specify voltage: 110 or 220 volts, and specify cycles: 25, 30, 40, 50 or 60 cycles.

Mfrs. No.	Diam. R.P.M.	Ht. Outlet In.	★ NET EACH
Variable Speed—6 Speed Regulator			
2EV	650-2600	3 15	\$40.00
2EHV	800-3400	3 15	\$50.00
Constant Speed			
2EC	1750	3 15	\$40.00
2EHC	3000	3 15	\$50.00
3EC	3400	4 17	\$60.00
4EC	3400	5 20	\$88.00

BUFFALO BABY CONOIDAL FANS

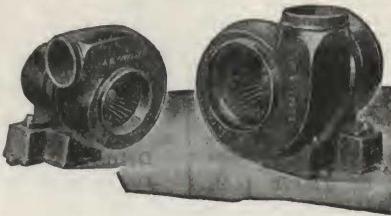


Fig. 4949

High efficiency multiblade with blast wheel. Housing is cast iron and can be swung around to discharge in any desired direction. This fan furnishes a large volume of air at a relatively low pressure with moderate speed. The wheel is accurately balanced, assuring a smooth-running, noiseless machine.

It is unexcelled for all kinds of drying and cooling purposes; for supplying fresh, cool air; and for exhausting smoke fumes, foul air, etc.

Cord and plug are furnished; no expense for installing, simply attach to an electric light socket. Outfits are furnished with 110 or 220 Volt D.C. motors and 110 or 220 volt single phase, 60 cycle A.C. Motors. Larger sizes.

Size No.	1	2	3
R.P.M.	1750	1750	1750
Cu. Ft. Min.	75	160	500
H. P. Motor	1/30	1/15	1/4
Shp. Wt. Lbs.	40	55	115
★ NET	\$31.50	\$35.00	\$49.00

BUFFALO ARMOR-PLATE COMBINATION PUNCH AND SHEARS

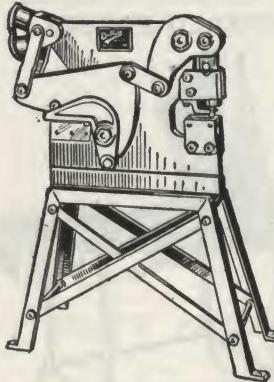


Fig. 4950

These hand power combination machines have "ARMOR-PLATE" frames, which have a tensile strength of 75,000 pounds. (Over seven times stronger than cast iron.)

The leverage is simple and powerful. The knives, punches and dies are of the best quality crucible steel, carefully ground and tempered. The punches and shears on these machines do clean, accurate work up to their full capacities. Extra heavy angle iron stand.

No. 2B	No. 103B	No. 104B
Punches, Diameter and Thickness $\frac{1}{4} \times \frac{3}{4}$	$\frac{3}{8} \times \frac{3}{8}$	$\frac{1}{2} \times \frac{1}{2}$
Shears Flats, Width and Thickness $2 \frac{1}{2} \times \frac{1}{2}$	$2 \frac{1}{2} \times \frac{1}{2}$	$3 \times \frac{3}{8}$
Punches Furnished, Inches $\frac{1}{8}, \frac{3}{16}, \frac{1}{4}, \frac{5}{16}, \frac{3}{8}, \frac{1}{2}, \frac{5}{8}, \frac{3}{4}$	Size Throats, Inches 4	5½
3 ½	Net Weight, Pounds 120	362
2EC	★ NET EACH \$60.00	\$120.00
2EHC	\$85.00	
3EC		
4EC		

BUFFALO BENCH TYPE SPLITTING SHEARS



Fig. 3993

Mfrs. 14. A strong, efficient hand shear that occupies very little bench space, 6 inches long, $5\frac{1}{4}$ inches high (without handle). High grade drop forged frame. Leverage is so powerfully compounded that it will cut 16 gauge sheets, taking $1\frac{1}{4}$ inch cut each stroke. Will shear $\frac{3}{4}$ by $\frac{1}{4}$ inch flats in a single stroke. Will cut wire up to No. 0. Shipping weight, 20 pounds.

★ NET EACH, \$9.00

Mfrs. 19A. Powerful compounded leverage. Shears and slits sheets up to 12 gauge. Cuts rounds up to $7\frac{1}{2}$ inch. Cuts flats up $\frac{3}{4}$ by $\frac{1}{4}$ inch. Will cut wire up to No. 0000. Will cut No. 14BX Cable, 4-3/16 inch knife. Shipping weight, 40 pounds.

★ NET EACH, \$26.00

STEEL SLITTING SHEAR

Capacity

3-16 Inch x 2 Inch Bars
10 Gauge Sheets

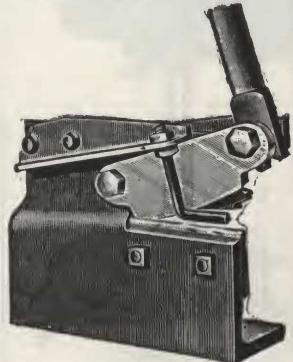


Fig. No. 2877

Indispensable for slitting sheet steel and for cutting steel bars, band iron, brake band lining, belting, etc. Pressed steel construction. Shear blades made of highest grade crucible steel. Equipped with adjustable hold-down. All parts interchangeable. Weight, 22 lbs. For the manufacturer, repairer, blacksmith, hardware dealer, or any place where cutting and shearing is required. Saves time and money. Often more work can be done with it in ten minutes than could be done in an hour by hand.

★ NET EACH, \$15.00